

## SEQUENCE LISTING

5 <110> Center for Genetic Engineering and Biotechnology.  
 <120> VECTOR FOR PRODUCTION OF ANGIOSPERM TRANSPLASTOMIC PLANTS.  
 <130> Vector for plastid transformation  
 10 <140> 0000  
 <141> 2002-08-05  
 <160> 26  
 15 <170> PatentIn Ver. 2.1  
 <210> 1  
 <211> 21  
 <212> DNA  
 20 <213> Artificial Sequence  
 <220>  
 <223> Description of Artificial Sequence: Oligonucleotide  
 25 corresponding to the region -291 to -270 (from the  
 start of translation) of the tobacco rbcL gene.  
 <400> 1  
 gggaagttct tattatcttag g 21  
 30 <210> 2  
 <211> 20  
 <212> DNA  
 <213> Artificial Sequence  
 35 <220>  
 <223> Description of Artificial Sequence: Oligonucleotide  
 corresponding to the region +1213 to +1233 (from the  
 start of translation) of the tobacco rbcL gene.  
 40 <400> 2  
 ccaaggatgt cctaaagttc 20  
 45 <210> 3  
 <211> 133  
 <212> DNA  
 <213> Artificial Sequence  
 50 <220>  
 <223> Description of Artificial Sequence: Synthetic DNA  
 fragment corresponding to the region -162 to -29  
 of the non-translating lider of the tobacco rbcL  
 55 gene, with modifications to introduce an "ideal"  
 lacO.  
 <400> 3  
 ccatggtcta ataatcaaac attctgatta gttgataatt caaattgtga gcgctcacia 60  
 tttgaaagat tcctgtgaaa agtttcatta acacggaatt cgtgtcgagt agaccttggt 120  
 60 gttgtgagaa ttc 133

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<210> 4
<211> 1523
5  <212> DNA
    <213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Nucleotide sequence
10    of the rbcL-border.

<400> 4
gggaagtctt tattatttag gttagtcagg tatttccatt tcaaaaaaaaa aaaaagtaaa 60
aaagaaaaat tgggttgcg tatatatatg aaagagtata caataatgat gtattttggca 120
15 aatcaaatac catggtctaa taatcaaaca ttctgattag ttgataattc aaattgtgag 180
cgctcacaaat ttgaaagatt cctgtgaaaa gtttcattaa cacggaattc gtgtcgagta 240
gaccttggtt ttgtgagaat tcttaattca tgagttgtag ggagggattt atgtcaccac 300
aaacagagac taaagcaagt gttggattca aagctggtgt taaagagtac aaattgactt 360
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20 ctcaacctgg agttccacct gaagaagcag gggccgcggg agctgccgaa tcttctactg 480
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gctaccgcat cgagcgtggt gttggagaaa aagatcaata tattgcttat gtagcttacc 600
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30 caggtacatg cgaagaaatg atcaaaagag ctgtatttgc tagagaattg ggcgttccga 1080
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35 gctttgttga tttactgcgt gatgattttg ttgaacaaga tcgaagtcgc ggtattttatt 1380
tcactcaaga ttgggtctct ttaccagggt ttctaccggt ggcttcagga ggtattcacg 1440
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gaggaacttt aggacatcct tgg 1523

40
<210> 5
<211> 24
<212> DNA
<213> Artificial Sequence

45
<220>
<223> Description of Artificial Sequence: Oligonucleotide
corresponding to the region -543 to -519 (from the
start of translation) of the rice atpB gene.

50
<400> 5
gacttgagtt gttgttattg taag 24

55
<210> 6
<211> 23
<212> DNA
<213> Artificial Sequence

60
<220>
<223> Description of Artificial Sequence: Oligonucleotide

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corresponding to the region +1188 to +1211 (from the start of translation) of the rice atpB gene.

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5  <400> 6
   atgtcctgaa gttctttgta acg
                                     23

   <210> 7
   <211> 132
10  <212> DNA
   <213> Artificial Sequence

   <220>
   <223> Description of Artificial Sequence: Synthetic DNA
15   fragment corresponding to the region -654 to -543
      of the non-translating lider of the rice atpB gene,
      with added restriction sites.

   <400> 7
20  aagcttggcc aaaaaggccg tcgacaaaat gggggggcatg cttaagttaa tgaatatgtt 60
   tcattcatat aatatgtttc attcatatat aatgggtaca ccctgtgtac attctatgct 120
   ataggaattc at
                                     132

25  <210> 8
   <211> 1887
   <212> DNA
   <213> Artificial Sequence

30  <220>
   <223> Description of Artificial Sequence: Nucleotide sequence
      of the atpB-border.

   <400> 8
35  aagcttggcc aaaaaggccg tcgacaaaat gggggggcatg cttaagttaa tgaatatgtt 60
   tcattcatat aatatgtttc attcatatat aatgggtaca ccctgtgtac attctatgct 120
   ataggaattc attcgacttg agttgttggt attgttaagt aacatgcttc gattattaaa 180
   ccatggattt gattcaccaa atccatcttt attgtatact ctttaataga tatagcgcaa 240
   ccccaaatac acttctaata cttattaagt tcttaataga cccctttttc ttattttgag 300
40  tggaaataacc taaatactac gaaaattctc tgttgacagc aatctatgct tcacagtagt 360
   atatatatttg tatatcgaag tcctagataa gaaagtagag taggcacaaa tcgtttacaa 420
   aaggcaaaat gtatatgaaa aaaagattga ttgaactttc cgacggactc attccatgag 480
   taaacgattg aatgggattc gtttggggcaa cgaaatcaag tgctgggtccc cttttctctc 540
   ttattgaatt aactaattca tttccttttg acttttggat ttttggatat ttttttggtg 600
45  ttgatttggc attattcaac aagaaaaaaa tcaaaatttc gataaattcc ttttttttga 660
   aaattatgtg ataattatga gaaccaatcc tactacttct cgtcccggggg tttctacaat 720
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   tccccggggc aagttacctt atatttataa tgctttggta gtcaagagtc gagacactga 840
   cggtaaagcaa attaatgtaa cttgtgaggt acaacaatta ttaggaaata atcgagttag 900
50  agctgtagct atgagtgcta cagatgggtt gatgagagga atggaagtga ttgacacggg 960
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   cgcgcccgcc tttatcgagt tagatacgaa attatccatc tttgaaactg gtattaaggt 1140
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55  agtaggtaaa acagtactca tcatggaatt aatcaacaat attgctaaag ctcacggggg 1260
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60  ctttcgtttt gttcaagcag gatcggaggt atctgcctta ttagggagaa tgccctctgc 1560
   agtgggttat caacctactc ttagtacaga aatgggttct ttgcaagaaa gaattacttc 1620

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tactaaaaag ggatctataa cttcgatcca agcggtttat gtacctgcgg acgatttgac 1680  
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 attagcttcc aaagggattt atcctgcagt agatccttta gattcaacct caactatggt 1800  
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 5 acaacgttac aaagaacttc aggacat 1887

<210> 9  
 <211> 24  
 10 <212> DNA  
 <213> Artificial Sequence

<220>  
 <223> Description of Artificial Sequence: Oligonucleotide primer  
 15 used to amplify the hgh gene by PCR, with a RBS.

<400> 9  
 gggaggaatg agatatgaaa aagc 24

20 <210> 10  
 <211> 24  
 <212> DNA  
 <213> Artificial Sequence

25 <220>  
 <223> Description of Artificial Sequence: Oligonucleotide primer  
 used to amplify the hgh gene by PCR, with added KpnI site.

30 <400> 10  
 gtcggtacct actctatttc ttg 24

35 <210> 11  
 <211> 41  
 <212> DNA  
 <213> Artificial Sequence

40 <220>  
 <223> Description of Artificial Sequence: Synthetic DNA  
 fragment with useful restriction sites for the construction  
 of the selection cassette with the hgh gene.

45 <400> 11  
 aagcttgatt cgagtgaacg cgtatagggc ccgggagatc t 41

50 <210> 12  
 <211> 2223  
 <212> DNA  
 <213> Artificial Sequence

55 <220>  
 <223> Description of Artificial Sequence: Nucleotide sequence of  
 the DNA fragment containing the selection cassette with  
 repeated borders that was cloned in the pBluescript.

60 <400> 12  
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 cggtgaggtg cggaacttct acaacctcaa agcccataac gttgcggata gaaccttct 120  
 caggggtcaat cagagcagcg tagtttgctg cgttcggcat cagtgctgcc agaatcgag 180

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5   agtagctatc tgggtcacag tagaacacac ggtcagcagc cggaacatag ttcttgggtca 240
    gagccgcacg agccttagtc agagccgcaa taatctcctt acccagcgca acttgggtcgg 300
    tcaagtgcgg ccttggttctg agtgggtctca attacggtag cagtacctaa gccctcgggg 360
    gatctgggga ggaatgagat atgaaaaagc ctgaattcac cgcgacgtct gtcgagaagt 420
    ttctgatcga aaagttcgac agcgtctccg acctgatgca gctctcggag ggcaagaat 480
    ctcgtgcttt cagcttcgat gtaggagggc gtggatatgt cctgcgggta aatagctgcg 540
    ccgatggttt ctacaaagat cgttatgttt atcggcactt tgcacgcggc gcgctcccg 600
    ttccggaagt gcttgacatt ggggagttta gcgagagcct gacctattgc atctcccgcc 660
    gtgcacaggg tgtcacgttg caagacctgc ctgaaaccga actgcccgtt gttctacaac 720
10  cggtcgcgga ggctatggat gcgatcgctg cggccgatct tagccagacg agcgggttcg 780
    gcccattcgg accgcaagga atcgggtcaat acactacatg gcgtgatttc atatgcgcga 840
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    tcgcgacagg tctcgatgag ctgatgcttt gggccgagga ctgccccgaa gtcgggcacc 960
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20  cggccgtctg gaccgatggc tgtgtagaag tactcgccga tagtggaac cgacgcccc 1380
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    ggcatcaaat taagcagaag gccatcctga cggatggcct ttttgcgttt ctacaaactc 2160
    tttttgttta tttttctaaa tacattcaaa tatgtatccg ctgggggatc cactagtctt 2220
35  aga 2223

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<210> 13

<211> 5669

40 <212> DNA

<213> Artificial Sequence

<220>

45 <223> Description of Artificial Sequence: Nucleotide sequence of DNA  
fragment from the vector pVTPA-f between the rice atpB and  
tobacco rbcL borders.

<400> 13

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    ggatctactg caggataaat cccttggaa gctaactctc tggaaagtac ggtagtagca 180
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60  ttgattaatt ccatgatgag tactgtttta cctactccag ctcccccaaa tagtccgatt 720
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```

```

25 <210> 14
    <211> 176
    <212> DNA
    <213> Artificial Sequence

```

```

30 <220>
    <223> Description of Artificial Sequence: Synthetic DNA
        fragment codifying for the promoter region of the plastid 16S
        ribosomal RNA (Prn), with added restriction sites.

```

```

35 <400> 14
    gaattccccc gggctgctcc cccgccgtcg ttcaatgaga atggataaga ggctcgtggg 60
    attgacgtga gggggcaggg atggctatat ttctgggagc gaactccggg cgaatacga 120
    gcgcttggtt acagttgtag ggagggattt catcgtttaa actcgagtga acgcgt 176

```

```

40 <210> 15
    <211> 5834
    <212> DNA
    <213> Artificial Sequence

```

```

45 <220>
    <223> Description of Artificial Sequence: Nucleotide sequence of DNA
        fragment from the vector pVTPA between the rice atpB and
        tobacco rbcL borders.

```

```

50 <400> 15
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    ggatctactg caggataaat ccctttggaa gctaactctc tggaaagtac ggtagtagca 180
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    gcagatacct ccgatcctgc ttgaacaaaa cgaaagatat tatcgatgaa tagaagcacg 420
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```

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```

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cagctagttc taga 5834

```

```

30 <210> 16
    <211> 96
    <212> DNA
    <213> Artificial Sequence

    <220>
35 <223> Description of Artificial Sequence: Nucleotide sequence of the
    chimeric PpsbA* promoter with added restriction sites and a RBS.

```

```

    <400> 16
40 gaattcacct tggttgacac gagtatataa gtcattgttat actggttgaat aaaaagcctt 60
    ccattttgat taaataaagg aggattttca tatgat 96

```

```

45 <210> 17
    <211> 106
    <212> DNA
    <213> Artificial Sequence

```

```

    <220>
50 <223> Description of Artificial Sequence: Synthetic DNA fragment
    codifying for a mini-cistron, a RBS, and restriction sites.

```

```

    <400> 17
55 catatgtatc gattacgtaa ggaggaataa accatggacg agctctagac tgcagcatgc 60
    ccgggatcct aggctgata tcaagcttct cgagctgtcg acagct 106

```

```

60 <210> 18
    <211> 365
    <212> DNA
    <213> Artificial Sequence

```

&lt;220&gt;

<223> Description of Artificial Sequence: Nucleotide sequence of DNA fragment from the vector pVIEP showing the expression cassette and surrounding restriction sites.

5

&lt;400&gt; 18

```

ggtaccgggc cccccctcga ggtcgacggg atcgataagc ttgatatcga attcaccttg 60
ggtgacacga gtatataagt catgttatac tgttgaataa aaagccttcc attttgatta 120
aataaaggag gattttcata tgtatcgatt acgtaaggag gaataaacca tggacgagct 180
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ggggtttttt gctgaaagga ggaactatat ccggtacctg atatcaagct tctcgagctg 360
tcgac

```

15

&lt;210&gt; 19

&lt;211&gt; 7510

&lt;212&gt; DNA

&lt;213&gt; Artificial Sequence

20

&lt;220&gt;

<223> Description of Artificial Sequence: Nucleotide sequence of DNA fragment from the vector pVTPA-f-GUS between the rice atpB and tobacco rbcL borders.

25

&lt;400&gt; 19

```

gtcgagggtca tgtcctgaag ttctttgtaa cggttgtaaag tttgcttaac tctttgtgca 60
gtttcataat gttcgttgcc aacgatccga gggttgtaaca tagttgaggt tgaatctaaa 120
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```

60

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    <210> 20
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35   <212> DNA
    <213> Artificial Sequence

```

```

    <220>
    <223> Description of Artificial Sequence: Oligonucleotide primer
40   used to amplify the aadA gene by PCR, with a RBS.

```

```

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```

```

45   <210> 21
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```

    <220>
    <223> Description of Artificial Sequence: Oligonucleotide primer
50   used to amplify the aadA gene by PCR.

```

```

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```

```

60   <210> 22
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    <212> DNA

```

## &lt;213&gt; Artificial Sequence

&lt;220&gt;

<223> Description of Artificial Sequence: Nucleotide sequence of DNA fragment from the vector pVTPA-aadA between the rice atpB and tobacco rbcL borders.

&lt;400&gt; 22

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60

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 <213> Artificial Sequence

5 <220>  
 <223> Description of Artificial Sequence: Nucleotide sequence of DNA  
 fragment from the vector pVTPA-f-GUS-aadA between the rice atpB  
 and tobacco rbcL borders.

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<211> 6465

<212> DNA

50 <213> Artificial Sequence

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<223> Description of Artificial Sequence: Nucleotide sequence of DNA fragment from the vector pVTPA-Bar between the rice atpB and tobacco rbcL borders.

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    <213> Artificial Sequence
50 <220>
    <223> Description of Artificial Sequence: Nucleotide sequence of DNA
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        tobacco rbcL borders.
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